Amendments to the Claims

1. (*Currently Amended*) A camera module comprising

a housing containing a solid-state image sensor with a radiation-sensitive surface, and an optical element located above the solid-state image sensor and the housing forming a shield against laterally scattered radiation to protect the radiation-sensitive surface; and

the housing includes a disk-shaped body with a primary radiation-opaque area and a secondary radiation-transparent area located within the primary area, the secondary area is located above the radiation-sensitive surface of the sensor and wherein a surface close to the sensor is smaller than a surface remote from the sensor; and

the optical element includes at least one plate of transparent material having two sides, each side covered with a layer of radiation-opaque material (ROM), and an aperture is defined in the at least one plate; and

wherein the aperture in the ROM layer deposited on a side of the at least one plate close to the sensor has a smaller surface area than the aperture in the ROM layer on a side of the at least one plate remote from the sensor and

wherein the primary radiation-opaque and secondary radiation-transparent areas are defined by portions of the plate of transparent material sandwiched between the radiation opaque layers and the apertures therein, respectively. ~~A camera module (10) which comprises a housing (1) that contains a solid-state image sensor (2) with a radiation-sensitive surface (3), and an optical element (4) located above the solid-state sensor (2) and which forms a shield against laterally scattered radiation to protect the radiation-sensitive surface (3) and comprises a disk-shaped body with a primary radiation-opaque area and a secondary radiation-transparent area located within the primary area, which secondary area is located above the radiation-sensitive surface (3) of the sensor (2) and of which a surface close to the sensor is smaller than a surface remote from the sensor, characterized in that the optical element (4) comprises at least one plate (40) of transparent material two sides of which are covered with a layer (41,42) of radiation-opaque material, in which plate an aperture is defined in which the aperture in the layer (41) deposited on a side of the at least one plate (40) close to the sensor (2) has a smaller surface area than the aperture in the layer (42) on a side of~~

~~the at least one plate (40) remote from the sensor (2) and in which the primary and secondary areas are defined by portions of the transparent plate (40) sandwiched between the opaque layers (41,42) and the apertures therein, respectively.~~

2. (*Currently Amended*) A camera module ~~(10)~~ as claimed in claim 1, characterized in that the optical element ~~(4) comprises~~ includes a single transparent plate ~~(40)~~ whose upper and lower surfaces are both covered with a radiation-opaque layer ~~(41,42)~~ in which circular and concentric apertures are provided.

3. (*Currently Amended*) A camera module ~~(10) as claimed in claim 1 or 2,~~ as claimed in claim 1, characterized in that the optical element ~~(4) comprises~~ includes two or more transparent plates which are separated from each other and of which at least one side is covered with a radiation-opaque layer in which an aperture has been defined and whereby the circumferences of the apertures are substantially located on a cone.

4. (*Currently Amended*) A camera module ~~(10) as claimed in claim 1, 2 or 3,~~ as claimed in claim 1, characterized in that the transparent material ~~comprises~~ includes a glass or a synthetic material.

5. (*Currently Amended*) A camera module ~~(10) as claimed in one or more of the aforementioned claims,~~ as claimed in claim 1, characterized in that the opaque layer ~~(41,42)~~ is made of blackened metal.

6. (*Currently Amended*) A camera module ~~(10) as claimed in one or more of the aforementioned claims,~~ as claimed in claim 1, characterized in that the housing ~~(1) comprises a further~~ further comprises an optical component in the form of a lens ~~(5)~~ which is also located above the radiation-sensitive surface ~~(3)~~ of the sensor ~~(2)~~ and which is formed in a further transparent plate ~~(50)~~.

7. (*Currently Amended*) A mobile telephone or personal digital assistant provided with a camera module ~~as claimed in one of the aforementioned claims.~~ as claimed in claim 1.

8. (*Currently Amended*) A method for manufacturing a camera module, the camera module comprising

a housing containing a solid-state image sensor with a radiation-sensitive surface, and an optical element located above the solid-state image sensor and the housing forming a shield against laterally scattered radiation to protect the radiation-sensitive surface; and

the housing includes a disk-shaped body with a primary radiation-opaque area and a secondary radiation-transparent area located within the primary area, the secondary area is located above the radiation-sensitive surface of the sensor and wherein a surface close to the sensor is smaller than a surface remote from the sensor; and

the optical element includes at least one plate of transparent material having two sides, each side covered with a layer of radiation-opaque material (ROM), and an aperture is defined in the at least one plate; and

wherein the aperture in the ROM layer deposited on a side of the at least one plate close to the sensor has a smaller surface area than the aperture in the ROM layer on a side of the at least one plate remote from the sensor and

wherein the primary radiation-opaque and secondary radiation-transparent areas are defined by portions of the plate of transparent material sandwiched between the radiation opaque layers and the apertures therein, respectively.

~~A method for the manufacturing of a camera module (10), which module comprises a housing (1) that contains a solid-state image sensor (2) with a radiation-sensitive surface (3), and an optical element (4) located above the solid-state sensor (2) and which forms a protective shield against laterally scattered radiation to protect the radiation-sensitive surface (3) and comprises a disk-shaped body with a primary radiation-opaque area and a secondary radiation-transparent area located within the primary area, which secondary area is located above the radiation-sensitive surface (3) of the sensor (2) and of which a surface close to the sensor (2) is smaller than a surface located remote from the sensor, characterized in that the optical element (4) is defined by at least one plate (40) of transparent material in the housing (1) above the sensor (2), of which two sides are covered with a radiation-opaque layer (41,42) which are provided with an aperture, in which the aperture in the layer (41) on a side~~

~~of the at least one plate (40) close to the sensor (2) has a smaller surface than the aperture in the layer (42) on a side of the at least one plate (40) remote from the sensor (2), and in which the primary and secondary areas are defined by portions of the transparent plate (40) which are sandwiched between the opaque layers (41,42) and the apertures therein, respectively.~~

9. (*Currently Amended*) A method as claimed in claim 8, characterized in that there is a plurality of optical elements and, if required,

a plurality of further components such as a lens are formed in a first stack of disk-shaped bodies, and

a plurality of solid-state image sensors are formed in a second stack of disk-shaped bodies, in which the electrical connections of the solid-state image sensors extend to the lower side of the second stack and

part of the first stack is deposited on each image sensor, after which individual camera modules are obtained by separating the second stack of image sensors by means of a dicing operation.

~~A method as claimed in claim 8, characterized in that a plurality of optical elements (4) and, if required, a plurality of further components such as a lens (5) are formed in a first stack (S1) of disk-shaped bodies, and a plurality of solid-state image sensors (2) are formed in a second stack (S2) of disk-shaped bodies, in which the electrical connections of the solid-state image sensors (2) extend to the lower side of the second stack (S2) and part of the first stack (S1) is deposited on each image sensor (2), after which individual camera modules (10) are obtained by separating the second stack (S2) of image sensors (2) by means of a dicing operation~~.

10. (*Currently Amended*) A method as claimed in claim 9, characterized in that the second stack ~~(S2)~~ is separated into individual elements each with its own image sensor ~~(2)~~ by means of a first dicing operation, ~~which~~ said elements are deposited on the first stack ~~(S1)~~ using a pick-and-place machine prior to the separation of the first stack ~~(S1)~~ by means of a second dicing operation.

11. (*Currently Amended*) A method as claimed in claim 9, characterized in that the first stack ~~(S1)~~ is aligned with and mounted on the second stack ~~(S2)~~ and the optical elements ~~(4)~~, any additional optical components ~~(5)~~ and the image sensors ~~(2)~~, are separated via a single dicing operation.

12. (*Currently Amended*) A method ~~as claimed in claim 9, 10 or 11,~~ as claimed in claim 9, characterized in that the second stack ~~(S2)~~ is deposited on a film ~~(80)~~ during the dicing operation and, after dicing up to the film ~~(80)~~, the grooves ~~(8A)~~ between the individual image sensors ~~(2)~~ formed by this operation and the grooves ~~(8B) either formed by dicing or otherwise which are located~~ that are defined, the grooves located between individual optical elements ~~(4)~~ and any further optical components ~~(5)~~ are filled with an electrically insulating synthetic material ~~(7)~~, after which this synthetic material ~~(7)~~ is diced with a dicing saw having a smaller saw cut and the individual camera modules ~~(10)~~ covered with an electrically insulating shell ~~(7)~~ are removed from the film ~~(80)~~.